INCH-POUND

MIL-DTL-3922/75C 15 August 2003 SUPERSEDING MIL-F-3922/75B 23 December 1981

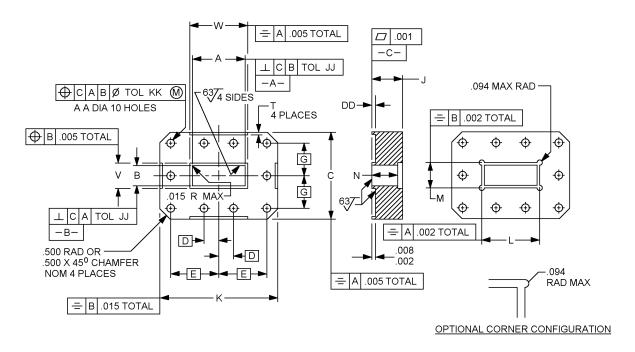
DETAIL SPECIFICATION SHEET

FLANGES, WAVEGUIDE, REDUCED HEIGHT

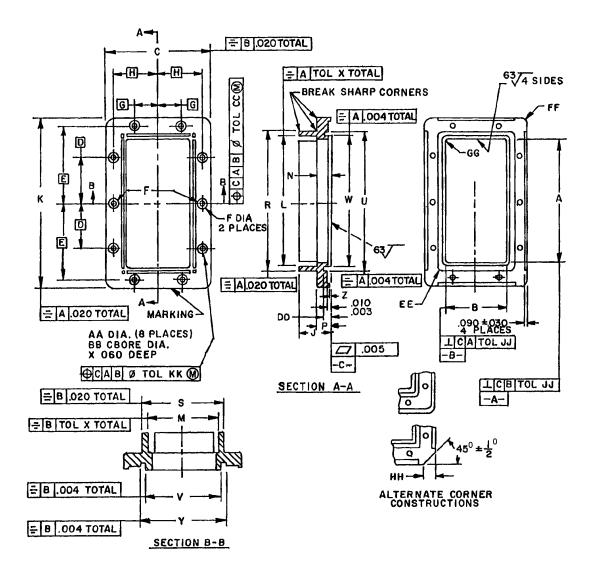
This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the flanges described herein shall consist of this specification sheet and MIL-DTL-3922.

This specification sheet is inactive for new design after 8 May 1998.

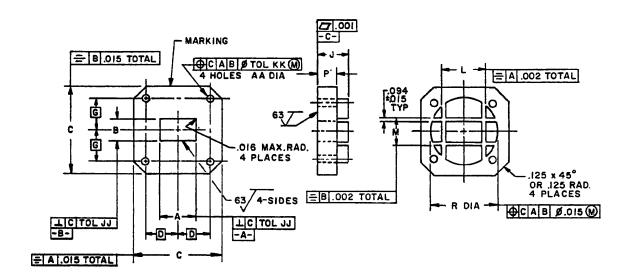


CONFIGURATION 1. CONTACT FLANGE, SOCKET MOUNTED (PART NUMBERS 01 THRU 04)



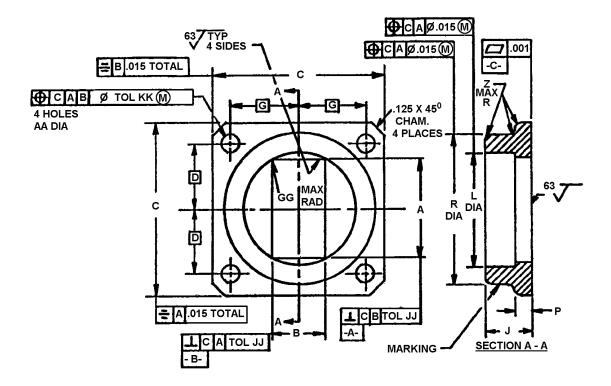
CONFIGURATION 2. CONTACT FLANGE, BUTT MOUNTED (PART NUMBERS 05 THRU 08).

FIGURE 1. Flanges - Continued.



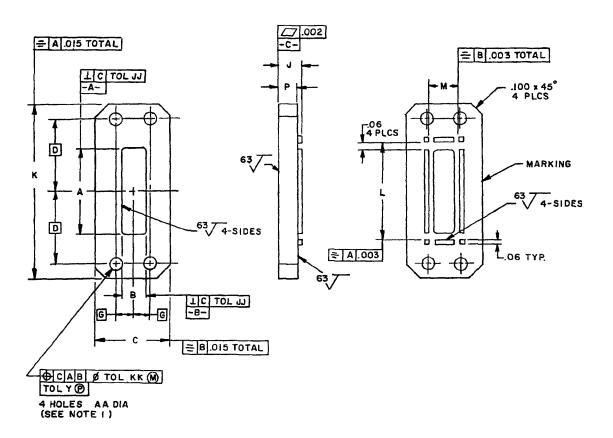
CONFIGURATION 3. COVER FLANGE, BUTT MOUNTED (PART NUMBER 09).

FIGURE 1. Flanges - Continued.

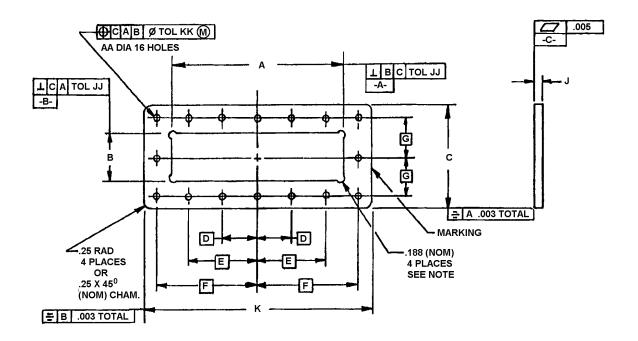


CONFIGURATION 4. COVER FLANGE, SLEEVE MOUNTED (PART NUMBER 10).

FIGURE 1. Flanges - Continued.



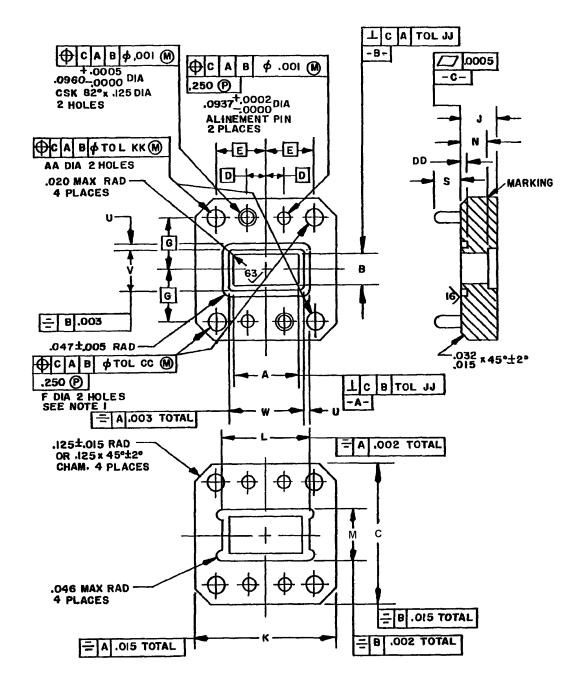
CONFIGURATION 5. COVER FLANGE, BUTT MOUNTED (PART NUMBERS 11, 12, 13 AND 14).



NOTE: CORNER RADII ARE EQUAL TO THE WAVEGUIDE WALL THICKNESS.

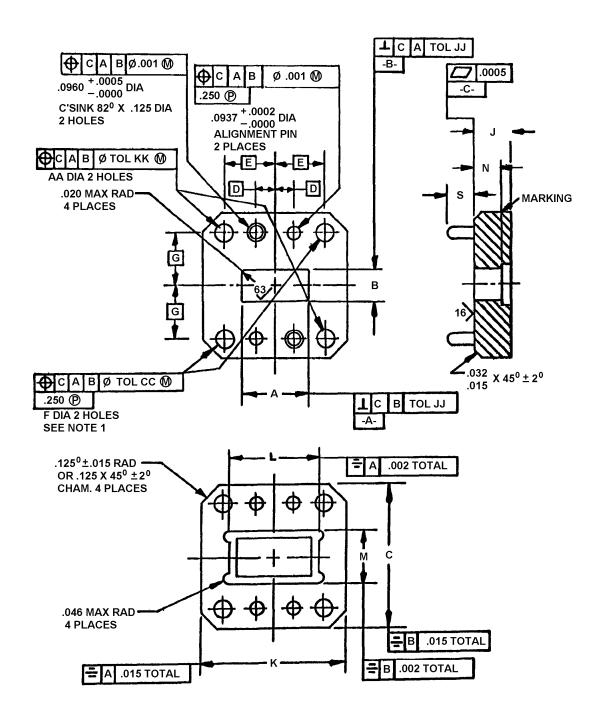
CONFIGURATION 6. CONTACT FLANGE, SLEEVE MOUNTED (PART NUMBERS 15 AND 16).

FIGURE 1. Flanges - Continued.



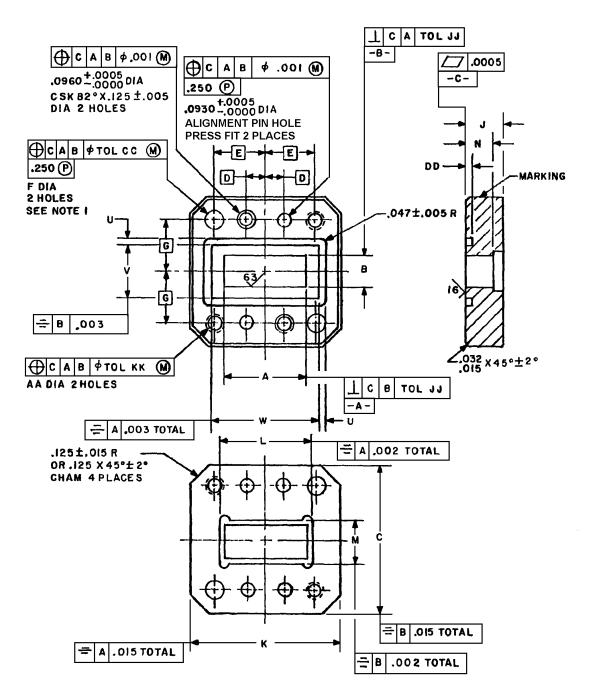
CONFIGURATION 7. GASKET FLANGE, SOCKET MOUNTED (PART NUMBER 17).

FIGURE 1. Flanges - Continued.



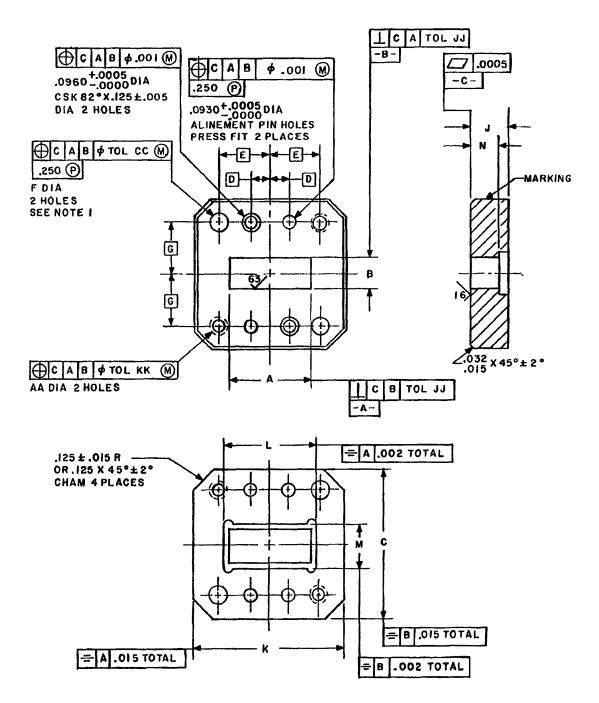
CONFIGURATION 8. COVER FLANGE, SOCKET MOUNTED (PART NUMBER 18).

FIGURE 1. Flanges - Continued.



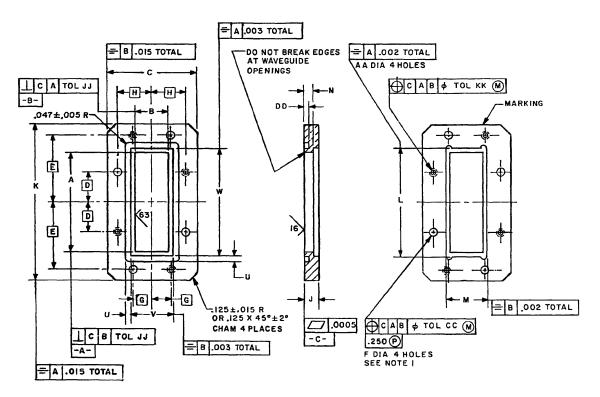
CONFIGURATION 9. GASKET FLANGES, SOCKET MOUNTED (PART NUMBERS 19 AND 20).

FIGURE 1. Flanges - Continued.



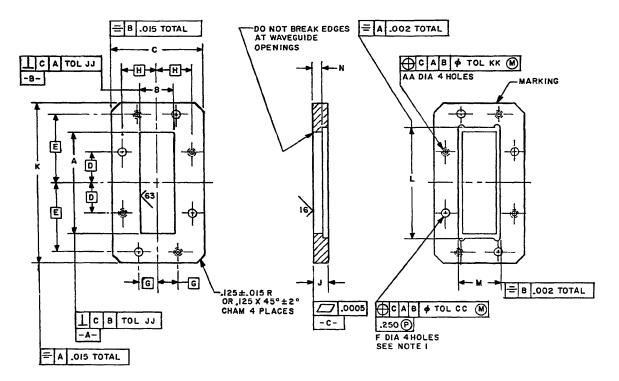
CONFIGURATION 10. COVER FLANGES, SOCKET MOUNTED (PART NUMBER 21 AND 22).

FIGURE 1. Flanges - Continued.



CONFIGURATION 11. GASKET FLANGES, SOCKET MOUNTED (PART NUMBER 23).

FIGURE 1. Flanges - Continued.



CONFIGURATION 12. COVER FLANGE, SOCKET MOUNTED (PART NUMBER 24).

FIGURE 1. Flanges - Continued.

Inches	mm	Inches	mm
.0002	.005	.032	.81
.0005	.013	.046	1.17
.001	.02	.047	1.19
.002	.05	.06	1.5
.003	.08	.090	2.29
.004	.10	.0930	2.362
.005	.13	.0937	2.380
.008	.20	.094	2.39
.010	.25	.0960	2.438
.015	.38	.100	2.54
.016	.41	.125	3.18
.020	.51	.188	4.78
.030	.76	.250	6.35
		.500	12.70

- The projected tolerance zone surface reference is datum C.
 Dimensions are in inches.
 Metric equivalents are given for general information only.
 Dimensions and tolerances are in accordance with ASME Y14.5M.

FIGURE 1. Flanges - Continued.

TABLE I. Part number characteristics and dimensions.

	Part no	umber M39	22/75-		Dimensions 1/ 2/			
	Used with			d with	5			
Dash no. <u>3</u> /	Mating flange M3922	Dash no. <u>4</u> /	Wave- guide M85	Mating flange M3922	Config- uration	А	В	С
01	/75-01 UG509/U UG510/U	02		/75-02	1	2.840 ±.005 (72.14) (.13)	1.004 ±.005 (25.50) (.13)	4.000 ±.060 (101.60) (1.52)
03	/75-03 UG511/U UG512/U	04		/75-04	1	1.372 ±.003 (34.85) (.08)	.487 ±.003 (12.37) (.08)	2.187 +.030 (55.55) (.76) 000
05	/75-05	06		/75-06	2	2.840 ±.005 (72.14) (.13)	.670 ±.005 (17.02) (.13)	3.000 ±.020 (76.20) (.51)
07	/75-07	08		/75-08	2	1.872 ±.003 (47.55) (.08)	.372 ±.003 (9.45) (.08)	2.500 ±.020 (63.50) (.51)
		09	/1-157 /1-158 /1-160 <u>5</u> /	/75-09	3	1.020 ±.003 (25.91) (.08)	.255 ±.003 (6.48) (.08)	1.687 ±.015 (42.85) (.38)
		10	/1-071 /1-072 /1-177 6/	/75-10	4	1.255 ±.003 (31.88) (.08)	.377 ±.003 (9.58) (.08)	1.875 ±.015 (47.62) (.38)
		11	/1-077 /1-078 /1-178 //	/75-12	5	.900 ±.002 (22.86) (.05)	.200 ±.002 (5.08) (.05)	.676 ±.010 (17.17) (.25)
		12	/1-077 /1-078 /1-178 <u>7</u> /	/75-11	5	.900 ±.002 (22.86) (.05)	.200 ±.002 (5.08) (.05)	.676 ±.010 (17.17) (.25)
		13	/1-077 <u>8</u> /	/75-14	5	.900 ±.002 (22.86) (.05)	.200 ±.002 (5.08) (.05)	.676 ±.010 (17.17) (.25)
		14	/1-077 <u>8</u> /	/75-13	5	.900 ±.002 (22.86) (.05)	.200 ±.002 (5.08) (.05)	.676 ±.010 (17.17) (.25)
		15		/75-15	6	10.250 ±.005 (260.35) (.13)	2.937 ±.005 (74.60) (.13)	5.930 ±.003 (150.62) (.08)
		16		/75-16	6	10.125 ±.005 (257.18) (.13)	2.812 ±.005 (71.42) (.13)	5.930 ±.003 (150.62) (.08)
		17		/75-18	7	.847 ±.003 (21.51) (.08)	.312 ±.003 (7.92) (.08)	1.375 ±.015 (34.92) (.38)
		18		/75-17	8	.847 ±.003 (21.51) (.08)	.312 ±.003 (7.92) (.08)	1.375 ±.015 (34.92) (.38)
19	/75-21	20		/75-22	9	.965 ±.002 (24.51) (.05)	.320 ±.002 (8.13) (.05)	1.50 ±.010 (38.1) (.25)
21	/75-19	22		/75-20	10	(24.01) (.00)	(0.13) (.03)	(30.1) (.23)
		23		/75-24	11	1.668 ±.004	.506 ±.004	1.50 ±.010
		24		/75-23	12	(42.37) (.10)	(12.85) (.10)	(38.1) (.10)

TABLE I. Part number characteristics and dimensions - Continued.

					Dime	ensions <u>1</u> /	<u>2</u> /		
Dash no. <u>3</u> /	Dash no. <u>4</u> /	D BSC.	E BSC.	F BSC.	G BSC.	H BSC.	J	К	L
<u>5/</u> 01	02	.750 (19.05)	2.250 (57.15)		1.500 (38.10)		.750 ±.015 (19.05) (.38)	5.500 +.060 (139.70) (1.52) 000	3.014 +.004 (76.56) (.10) 000
03	04	.375 (9.52)	1.187 (30.15)		.812 (20.62)		.625 ±.015 (15.88) (.38)	2.937 +.030 (74.60) (.76) 000	1.512 +.003 (38.40) (.08) 000
05	06	1.281 (32.54)	1.914 (48.62)	.257 ±.003 (6.53) (.08)	.578 (14.68)	1.164 (29.57)	.690 ±.020 (17.53) (.51)	4.50 ±.020 (114.3) (.51)	3.010005 (76.45) (.13) +.000
07	08	.563 (14.30)	1.914 (48.62)		.438 (11.13)	.914 (23.22)	.690 ±.020 (17.53) (.51)	3.500 ±.020 (88.90) (.51)	2.010005 (51.05) (.13) +.000
	09	.640 (16.26)			.670 (17.02)		.500 ±.015 (12.70) (.38)		1.151 +.003 (29.24) (.08) 000
	10	.676 (17.17)			.737 (18.72)		.438 ±.015 (11.13) (.38)		1.312 ±.015 (33.32) (.38)
	11	.75 (19.0)			.150 (3.81)		.190 ±.010 (4.83) (.25)	1.800 ±.010 (45.72) (.25)	.963 +.003 (24.46) (.08) 000
	12	.75 (19.0)			.150 (3.81)		.156 ±.010 (3.96) (.25)	1.800 ±.010 (45.72) (.25)	.963 +.003 (24.46) (.08) 000
	13	.75 (19.0)			.150 (3.81)		.190 ±.010 (4.83) (.25)	1.800 ±.010 (45.72) (.25)	1.003 +.003 (25.48) (.08) 000
	14	.75 (19.0)			.150 (3.81)		.156 ±.010 (3.96) (.25)	1.800 ±.010 (45.72) (.25)	1.003 +.003 (25.48) (.08) 000
	15	2.000 (50.80)	4.000 (101.60)	5.875 (149.22) BSC	2.218 (56.34)		.625 ±.015 (15.88) (.38)	13.250 ±.03 (366.55) (.8)	
	16	2.000 (50.80)	4.000 (101.60)	5.875 (149.22) BSC	2.218 (56.34)		.625 ±.015 (15.88) (.38)	13.250 ±.03 (366.55) (.8)	
	17	.200 (5.08)	.423 (10.74)	.144 +.003 (3.66) (.08) 000	.500 (12.70)		.250 ±.015 (6.35) (.38)	1.375 ±.015 (34.92) (.38)	.977 +.003 (24.82) (.08) 000
	18	.200 (5.08)	.423 (10.74)	.144 +.003 (3.66) (.08) 000	.500 (12.70)		.250 ±.015 (6.35) (.38)	1.375 ±.015 (34.92) (.38)	.977 +.003 (24.82) (.08) 000
19 21	20 22	.216 (5.49)	.562 (14.27)		.5625 (14.287)		.245 ±.010 (6.22) (.25)	1.62 ±.010 (41.1) (.25)	1.086 +.004 (27.58) (.10) 000
	23 24	.500 (12.70)	1.100 (27.94)		.314 (7.98)	.570 (14.48)	.250 ±.005 (6.35) (.13)	2.50 ±.010 (63.5) (.25)	1.800 +.004 (45.72) (.10) 000

TABLE I. Part number characteristics and dimensions Continued.

				Dimensi	ons <u>1</u> / <u>2</u> /		
Dash no. <u>3</u> /	Dash no. <u>4</u> /	M	N	P	R	S	Т
01	02	1.178 +.004 (29.92) (.10) 000	.500 ±.005 (12.70) (.13)				.090 ±.015 (2.29) (.38)
03	04	.627 +.003 (15.93) (.08) 000	.375 ±.005 (9.52) (.13)				.063 ±.015 (1.60) (.38)
05	06	1.510005 (38.35) (.13) +.000	.380 ±.005 (9.65) (.13)	.380 ±.020 (9.65) (.51)	3.250 ±.020 (82.55) (.51)	1.750 ±.020 (44.45) (.51)	
07	08	1.010005 (25.65) (.13) +.000	.380 ±.005 (9.65) (.13)	.380 ±.020 (9.65) (.51)	2.250 ±.020 (57.15) (.51)	1.250 ±.020 (31.75) (.51)	
	09	.641 +.003 (16.28) (.08) 000		.250 ±.015 (6.35) (.38)	1.500 ±.015 (38.10) (.38)		
	10			.250 ±.015 (6.35) (.38)	1.531 ±.015 (38.89) (.38)		
	11	.263 +.003 (6.68) (.08) 000		.140 ±.010 (3.56) (.25)			
	12	.263 +.003 (6.68) (.08) 000		.110 ±.010 (2.79) (.25)			
	13	.303 +.003 (7.70) (.08) 000		.140 ±.010 (3.56) (.25)			
	14	.303 +.003 (7.70) (.08) 000		.110 ±.010 (2.79) (.25)			
	15						
	16						
	17	.442 +.003 (11.23) (.08) 000	.145 ±.005 (3.68) (.13)			.175 ±.010 (4.44) (.25)	
	18	.442 +.003 (11.23) (.08) 000	.145 ±.005 (3.68) (.13)			.175 ±.010 (4.44) (.25)	
19 21	20 22	.440 +.002 (11.18) (.05) 000	.125 ±.005 (3.18) (.13)				
	23 24	.638 +.004 (16.20) (.10) 000	.125 ±.005 (3.18) (.13)				

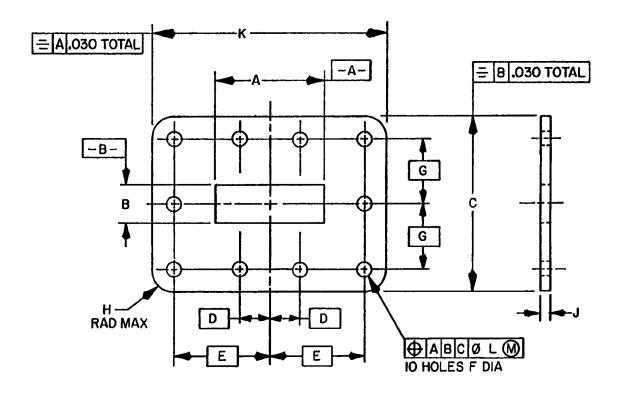
TABLE I. Part number characteristics and dimensions Continued.

					Dimensions 1	/ 2/		
Dash no. 3/	Dash no. 4/	U	V	W	Х	Y	Z	AA
01	02		1.419 ±.005 (36.04) (.13)	3.255 ±.005 (82.68) (.13)				.391 +.005 (9.93) (.13) 000
03	04		8.75 ±.005 (222.2) (.13)	1.750 ±.005 (44.45) (.13)				.204 +.004 (5.18) (.10) 000
05	06	3.500 ±.004 (88.90) (.10)	1.624 ±.004 (41.25) (.10)	3.124 ±.004 (79.35) (.10)	.003 (.08)		.002 Max (.05)	.257 ±.005 (6.53) (.13)
07	08	2.498 ±.004 (63.45) (.10)	1.122 ±.004 (28.50) (.10)	2.122 ±.004 (53.90) (.10)	.003		.002 Max (.05)	.257 ±.005 (6.53) (.13)
	09							.169 +.003 (4.29) (.08) 000
	10							.169 +.003 (4.29) (.08) 000
	11					.110 (2.79)		.138-32 UNC-2B THD thru
	12							.149 ±.003 (3.78) (.08) Dia hole thru
	13					.110 (2.79)		.138-32 UNC-2B THD thru
	14							.149 ±.003 (3.78) (.08) Dia hole thru
	15							.411 ±.005 (10.44) (.13)
	16							.411 ±.005 (10.44) (.13)
	17	.094 +.010 (2.39) (.25) 000	.437 ±.003 (11.10) (.08)	.967 ±.003 (24.56) (.08)				.138-32 UNC-2B
	18							.138-32 UNC-2B
19	20	.094 +.010 (2.39) (.25)	.600 ±.004 (15.24) (.10)	1.214 ±.004 (30.84) (.10)				.138-32 UNC-2B
21	22							.138-32 UNC-2B
	23	.094 +.010 (2.39) (.25)	.680 ±.002 (17.27) (.05)	1.792 ±.002 (45.52) (.05)				.138-32 UNC-2B
	24							.138-32 UNC-2B

TABLE I. Part number characteristics and dimensions Continued.

					Dime	ensions <u>1</u> / <u>2</u> /				
Dash no. <u>3</u> /	Dash no. <u>4</u> /	BB	CC	DD	EE	FF	GG	НН	JJ	KK
01	02			.051 +.000 005 (1.30) (.13)					.004 (.10)	.016 (.41)
03	04			.028 +.000 003 (.71) (.08)					.004 (.10)	.014 (.36)
05	06	.531 ±.005 (13.49) (.13)	.004 (.10)	.053 ±.005 (1.34) (.13)	.094 ±.003 (2.39) (.08)	.310 ±.020 (7.87) (.51)	.05 Max (1.3)	.310 ±.020 (7.87) (.51)	.005 (.13)	.007 (.18)
07	08	.531 ±.005 (13.49) (.13)		.053 ±.005 (1.34) (.13)	.094 ±.003 (2.39) (.08)	.310 ±.020 (7.87) (.51)	.03 Max (.8)	.310 ±.020 (7.87) (.51)	.005	.005
	09								.002	.004
	10						.031 (.79)		.003	.002
	11								.002	.004
	12								.002	.004
	13								.002	.004
	14								.002	.004
	15								.005	.014
	16								.005	.014 (.36)
	17		.003	.057 ±.001 (1.45) (.03)					.003	.003
	18		.003						.003	.003
19	20		.003	.056 +.002 (1.42) (.05) 000)					.003	.003 (.08)
21	22		.003						.003 (.08)	.003 (.08)
	23		.002 (.05)	.056 +.002 (1.42) (.05) 000					.003 (.08)	.003 (.08)
	24		.002 (.05)						.003 (.08)	.003 (.08)

- 1/ Dimensions are in inches.
- 2/ Metric equivalents are given for general information only.
- 3/ Material shall be copper alloy.
- 4/ Material shall be aluminum alloy.
- 5/ Waveguide shall be the same as M85/1-157, 158, and 160 except the B dimension shall be .255 \pm .003 (6.48 \pm .08) and the D dimension .383 \pm .005 (9.73 \pm .13).
- $\underline{6}$ / Waveguide shall be the same as M85/1-071, 072, and 177 except the B dimension shall be .248 \pm .004 (6.30 \pm .10) and the D dimension .376 \pm .004 (9.55 \pm .10).
- $\underline{7}$ / Waveguide shall be the same as M85/1-077, 088, and 178 except the B dimension shall be .200 \pm .004 (5.08 \pm .10) and the D dimension .260 \pm .004 (6.60 \pm .10).
- 8/ Waveguide shall be the same as M85/1-077 except the B dimension shall be .200 \pm .004 (5.08 \pm .10) and the D dimension .300 \pm .004 (7.62 \pm .10).
- 9/ Dimensions and tolerances are in accordance with ASME Y14.5M.

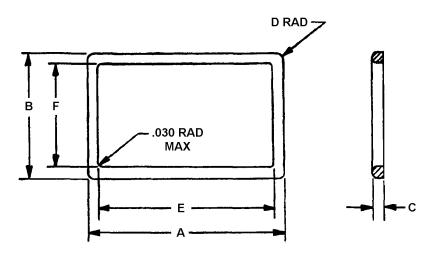


CONFIGURATION 1. GASKET DIMENSIONS FOR PART NUMBERS 01, 02, 03 AND 04.

Used with part no. M3922/75-	A ±.015 (.38)	B ±.015 (.38)	C ±.015 (.38)	D BSC.	E BSC.	F ±.015 (.38)	G BSC.
01, 02	3.375	1.438	3.688	.750	2.250	.438	1.500
	(85.72)	(36.53)	(93.68)	(19.05)	(57.15)	(11.13)	(38.10)
03, 04	1.750	.875	2.000	.375	1.188	.219	.812
	(44.45)	(22.22)	(50.80)	(9.52)	(30.18)	(5.56)	(20.62)

Used with part no. M3922/75-	Н	J	К	L
01, 02	.390	.125 ±.007	5.188 ±.015	.050
	(9.91)	(3.18) (.18)	(131.78) (.38)	(1.27)
03, 04	.188	.062 ±.005	2.750 ±.015	.014
	(4.78)	(1.57) (.13)	(69.85) (.38)	(.36)

FIGURE 2. Gaskets.



CONFIGURATION 2. GASKET DIMENSIONS FOR PART NUMBERS 05, 06, 07, 08, 17, 19, 20 AND 23.

Used with part no. M3922/75-	А	В	С	D Rad	E	F
05, 06	3.451 ±.015 (87.66) (.38)	1.951 ±.004 (49.56) (.25)	.139 ±.004 (3.53) (.10)			
07, 08	2.449 ±.010 (62.20) (.25)	1.449 ±.010 (36.80) (.25)	.139 ±.004 (3.53) (.10)			
17			.067 ±.003 (1.70) (.08)	.047 ±.005 (1.19) (.13)	.969 ±.004 (24.61) (.10)	.439 ±.004 (11.15) (.10)
19			.067 ±.003 (1.70) (.08)	.047 ±.005 (1.19) (.13)	1.219 ±.004 (30.96) (.10)	.635 ±.004 (16.13) (.10)
20			.067 ±.003 (1.70) (.08)	.047 ±.005 (1.19) (.13)	1.219 ±.004 (30.96) (.10)	.635 ±.004 (16.13) (.10)
23			.067 ±.003 (1.70) (.08)	.047 ±.005 (1.19) (.13)	1.790 ±.004 (45.47) (.10)	.678 ±.004 (17.22) (.10)

NOTES:

- 1. Dimensions are in inches.
- Metric equivalents are given for general information only.
 Dimensions are in accordance with ASME Y14.5M.

FIGURE 2. Gaskets - Continued.

TABLE II. Items supplied with flanges.

Item	M3922/75-	M3922/75-	M3922/75-	M3922/75-	M3922/75-	
	01, 02	03, 04	05, 06	07, 08	15, 16	
Gasket	1 each (see	1 each (see	1 each (see figure	1 each (see	1 each (see	
	figure 2,	figure 2,	2,	figure 2,	MIL-DTL-	
	configuration 1)	configuration 1)	configuration 2)	configuration 2)	24211/2-019)	
Hex head	(9.53)	(4.83)	(6.35)	(6.35)	(9.53)	
cap screw	5 each, .375-16	5 each, .190-32	5 each, .250-20	5 each, .250-20	8 each, .375-16	
	UNC-2A	UNF-2A 1.50	UNC-2A 1.0	UNC-2A 1.0	UNC-2A 1.750	
	2.0 (50.80) long	(57.15) long	(25.40) long	(25.40) long	(44.45) long	
Hex nut	(9.53)	(4.83)	(6.35)	(6.35)	(9.53)	
	5 each .375-16	5 each .190-32	5 each, .250-20	5 each, .250-20	8 each, .375-16	
	UNC-2B	UNF-2B	UNC-2B	UNC-2B	UNC-2B	
Spring	5 each, .375	5 each, .190	5 each, .250	5 each, .250	8 each, .375	
lockwasher	(9.53) x .094	(4.83) x .047	(6.35) x .062	(6.35) x .062	(9.53) x .094	
	(2.39) thick	(1.19) thick	(1.57) thick	(1.57) thick	(2.39) thick	
Item	M3922/75-17	M3922/75-18	M3922/75-19&20	M3922/75-21&22	M3922/75-23	M3922/75-24
Gasket	1 each		1 each		1 each	
	(see figure 2,		(see figure 2,		(see figure 2,	
	configuration 2)		configuration 2)		configuration 2)	
Hex head	(3.51)	(3.51)	(3.51)	(3.51)	(3.51)	(3.51)
cap screw	2 each, .138-32	2 each, .138-32	2 each, .138-32	2 each, .138-32	2 each, .138-32	2 each, .138-32
·	UNC-2A	UNC-2A	UNC-2A	UNC-2A	UNC-2A	UNC-2A
	.50 long (12.7)	.50 long (12.7)	.50 long (12.7)	.50 long (12.7)	.50 long (12.7)	.50 long (12.7)
Hex nut						
Spring	2 each, .138 x	2 each, .138 x	2 each, .138 x	2 each, .138 x	2 each, .138 x	2 each, .138 x
lockwasher	.031 thick	.031 thick	.031 thick	.031 thick	.031 thick	.031 thick
	(3.51) (0.79)	(3.51) (0.79)	(3.51) (0.79)	(3.51) (0.79)	(3.51) (0.79)	(3.51) (0.79)

NOTES:

- 1. Dimensions are in inches.
- 2. Metric equivalents are given for general information only.
- 3. Metric equivalents are in parentheses.
- Dimensions are in accordance with ASME Y14.5M. (Application for copies should be directed to American Society of Mechanical Engineers, 345 East 47th Street, New York, New York 10017.)

REQUIREMENTS:

Dimensions and configuration:

Flange: See configurations 1 through 12 of figure 1 and table I.

Gasket: See configurations 1 and 2 of figure 2.

Material:

Flange: Metallic alloy as specified in table I.

Hex head cap screw, hex nut and spring lockwasher: Corrosion resisting steel in accordance with SAE-AMS-QQ-S-763, 300 series.

Gasket (Configuration 1): Class 4, Type A, Grade 60 Neoprene in accordance with MIL-R-6855.

Gasket (Configuration 2): Silicon rubber in accordance with SAE-AMS-3304. (Applications for copies of SAE Aerospace Materials Specifications (AMS) publications should be addressed to the Society of Automotive Engineers, Inc. (SAE), 400 Commonwealth Drive, Warrendale, PA 15096 or standards@sae.org.)

Marking: See configurations 1 through 12 of figure 1.

Items supplied with flanges: See table II.

Part number: M3922/75 (dash number from table I).

Cross reference of part numbers: See table III.

TABLE III. Cross reference of part numbers to frequency range.

Part number	Frequency		
M3922/75	range (GHz)		
01, 02	2.60-5.85		
03, 04	5.85-12.4		
05, 06	2.60-3.95		
07, 08	3.95-5.85		
09	7.00-11.0		
10	7.05-10.0		
11, 12, 13, 14	8.20-12.4		
15, 16	.75-1.12		
17, 18	7.5-18.0		
19, 20, 21, 22	7.0-18.0		
23, 24	4.3-10.5		

Custodians:

Army - CR Navy - EC

DLA - CC

Air Force - 11

Preparing activity: DLA - CC

(Project 5985-1278)

Review activities:

Army - MI

Navy - AS, MC, OS, SH

Air Force - 99